

WHITE PAPER:

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**CLINOPTILOLITE ZEOLITE IN A COLLOIDAL  
SUSPENSION & THE SCIENCE AND RESEARCH  
OF PURE BODY EXTRA**



**About The White Paper:**

The information presented in this paper is intended for professional education and is sourced from published research, articles, and books. This paper is not intended to serve as the basis for health advice, and should not be considered to replace the care of a licensed health professional.

## What is Zeolite?

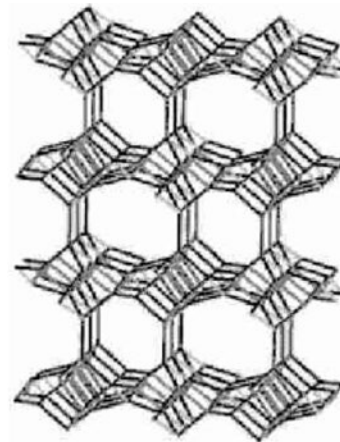
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Zeolites are crystalline, hydrated aluminosilicates of alkali and alkaline earth metals, having infinite, three-dimensional atomic structures. They are further characterized by the ability to lose and gain water reversibly and to exchange certain constituent atoms, also without major change of atomic structure.

Along with quartz and feldspar minerals, zeolites are three-dimensional frameworks of silicate ( $\text{SiO}_4$ ) tetrahedra in which all four corner oxygen's of each tetrahedron are shared with adjacent tetrahedra. If each tetrahedron in the framework contains silicon as its central atom, the overall structure is electrically neutral, as is quartz ( $\text{SiO}_2$ ).

In zeolite structures, some of the quadri-charged silicon is replaced by triply-charged aluminum, giving rise to a deficiency of positive charge. The charge is balanced by the presence of singly- and doubly-charged atoms, such as sodium ( $\text{Na}^+$ ), potassium ( $\text{K}^+$ ), calcium ( $\text{Ca}^{2+}$ ), and magnesium ( $\text{Mg}^{2+}$ ), elsewhere in the structure.

The empirical formula of a zeolite is of the type:  $\text{M}_2/n\text{O} \cdot \text{Al}_2\text{O}_3 \cdot x\text{SiO}_2 \cdot y\text{H}_2\text{O}$ , where M is any alkali or alkaline earth atom, n is the charge on that atom, x is a number from 2 to 10, and y is a number from 2 to 7. The chemical formula for clinoptilolite, a common natural zeolite is:  $(\text{Na}_3\text{K}_3)(\text{Al}_6\text{Si}_{40})\text{O}_{96} \cdot 24\text{H}_2\text{O}$



*Fig. 1. Crystal structure of the zeolite clinoptilolite with its 8-ring and 10-ring channels.*

## How do zeolites work?

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For clinoptilolite, atoms or cations (charged metal atoms) within the second set of parentheses (aluminum and silicon) are known as structural atoms, because with oxygen they make up the rigid framework of the structure. This is why the form of aluminum in zeolites is completely inert and does not react or release in the body in any way.

Those within the first set of parentheses (sodium and potassium) are known as exchangeable ions, because they can be replaced (exchanged) more or less easily with other cations in aqueous solution, without affecting the aluminosilicate framework. This phenomenon is known as ion exchange, or more commonly cation exchange.

The exchange process involves replacing one singly-charged exchangeable atom in the zeolite by one singly-charged atom in a solution or replacing two singly-charged exchangeable atoms in the zeolite by one doubly-charged atom in a solution.

The magnitude of such cation exchange in a given zeolite is known as its cation-exchange capacity (CEC) and is commonly measured in terms of moles of exchangeable cation per gram (or 100 grams) of zeolite or in terms of equivalents of exchangeable cations per gram (or 100 grams) of zeolite.

While the ratio of exchange for ions is fixed, the effectiveness of cation exchange is directly related to the particle size of the zeolite. The smaller the zeolite particle is, the greater the available negatively-charged surface area. A large surface area provides a greater ability to attract positively-charged ions for cation exchange.

## Health Benefits And Uses Of Zeolite:

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Zeolites have been investigated in a broad spectrum of uses. Several of these applications take advantage of the adsorption and ion exchange properties of zeolites.

- The property of clinoptilolite to remove heavy metals has been documented extensively<sup>104, 109</sup>
- Recently, two clinical studies involving healthy volunteers and patients suffering from malignant disease and diabetes demonstrated that orally administered natural clinoptilolite is a potent antioxidant.<sup>98</sup>
- When applied externally in powder form, zeolite has also been found to quicken the healing of wounds and surgical incisions; in Cuba, clinoptilolite is commonly used to treat topical wounds in horses and livestock.
- As proven bactericides and fungicides, zeolites have been used to control urinary tract infection and dental plaque formation.<sup>99-101</sup>
- It is well known that silica particles prevent almost completely the onset of spontaneous diabetes in young BB rats and the destruction of  $\beta$  cells in non-obese mice given cyclophosphamide.<sup>102-103</sup>
- In mice with alloxan-induced diabetes, natural clinoptilolite has been shown to avert or diminish some late sequelae of the disorder, such as polyneuropathy.<sup>90</sup>
- Accumulating evidence has suggested that zeolites may significantly affect the regulation of the immune system.

Ueki et al have reported that silica, silicates, and aluminosilicates may act as nonspecific immunostimulators in a manner similar to that of the superantigens (SAGs),<sup>104,105</sup> a class of powerful, immunostimulatory bacterial and viral toxins. Unlike conventional antigens, SAGs bind as unprocessed proteins to particular motifs of the variable region of the  $\beta$  chain ( $V\beta$ ) of the T-cell receptor (TcR) outside the antigen-binding groove and to invariant regions of major histocompatibility complex (MHC) class II molecules on the surface of antigen-presenting cells (APCs).

As a consequence, SAGs, in nanogram to picogram concentrations, stimulate up to 10% to 30% of the host T-cell repertoire, whereas in conventional antigenic peptide-TcR binding, only 1 in  $10^5$  to  $10^6$  T cells (0.01%-0.0001%) is activated.<sup>106</sup> In accordance with this theory, proinflammatory macrophages, which belong to MHC class II APCs, are activated by fibrogenic silicate particles,<sup>107,108</sup> and the removal of MHC class II DP/DR+ cells results in a lack of macrophage stimulation by the silicate chrysotile.<sup>104</sup>

More recently, Pavelic et al have demonstrated that the lymphocytes from lymph nodes of mice that were fed for 28 days with micronized zeolite clinoptilolite provoked a significantly higher allogeneic graft-versus-host reaction than did lymphocytes in control mice. After the mice were administered clinoptilolite intraperitoneally, the number of peritoneal macrophages increased significantly, as did their superoxide anion production.<sup>109</sup>

## The ability of Clinoptilolite to attract and trap positively-charged toxins

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Clinoptilolite has a cage-like structure, with pores and channels running through the crystal. The cage and surrounding mineral carries a net negative charge, making it one of the few negatively charged minerals found in nature. Because of its cage-like structure and negative charge, clinoptilolite has the ability to draw and trap within and on itself<sup>98, 107</sup> positively charged heavy metals and other toxic substances<sup>90,92,97,99,101,106,108,111,121,122</sup>.

The negative charges of the  $\text{AlO}_4$  units are balanced by the presence of four-exchangeable, positively charged metals known as cations. These cations usually consist of calcium, magnesium, sodium and potassium. These ions are only loosely held and can be readily displaced by other substances, such as toxic heavy metals or other organics.

This phenomenon is known as cationic exchange, and it is the very high cationic exchange capacity of zeolites, which provides for many of their useful properties. Another special aspect of this structure is that the pore and channel sizes are nearly uniform, allowing the crystal to act as a molecular sieve. Clinoptilolite seems to be highly specific for the heavy metals. Research has shown that the smaller the diameter of the metal and the higher the charge of the metal, the greater the affinity it has for the zeolite.

Higher charges simply increase the strength of binding with higher binding characteristics. The small size allows for deeper access into the zeolite pores with more points of coordination. As an example of this phenomenon, arsenic has a charge of +3 and an atomic radius of approximately 1.8 angstroms, while potassium has a charge of only +1 and an atomic radius of approximately 2.8 angstroms. The arsenic binds with very high affinity for the zeolite while the potassium has no affinity whatsoever.

The clinoptilolite binds a variety of toxins. This includes heavy metals (Lead, Cadmium, Mercury, etc.), nitrosamines, and others. Cationic exchange is an entirely passive process—when the zeolite is in close proximity to these high-affinity compounds, they will be drawn to the zeolite and either absorbed into the cage or adsorbed onto the surface of the zeolite. There is no chemical activity in this process.

The zeolite will not be drawn to compounds in an effort to ‘rip’ metals away from them. In other words, the zeolite will not pull metals that are sequestered inside tissue or bone. If, on the other hand, the tissue has already released free metals into the system, the zeolite will have the ability to trap and remove it. Organics (Non Volatile and Volatile) are also removed by Clinoptilolite.<sup>91,92,93,97,99,105,106,108,121</sup> Organics are not trapped or exchanged in or onto the surface as in heavy metals, but rather are absorbed into and onto the clinoptilolite using a combination of ionic attraction rather than exchange. This attraction is based on the overall charge of the organic compound with preference given to positive charge points on the molecule itself.

Thus, a large molecule such as ammonium citrate will still be removed even though its size is much larger than the particle of zeolite. There are many studies ongoing today to take advantage of this effect. See references 123 to 130 below. While Clinoptilolite is mostly known for heavy metal removal, the ability to, positively affect, the removal of potentially toxic organic compounds at the same time cannot be ignored.

## How effective is Clinoptilolite in Cation Exchange?

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A mole of an atom or cation is its molecular or atomic weight written in terms of grains (gram-molecular weight); thus, a mole of sodium (Na) weighs 22.99 grams, and a mole of calcium (Ca) weighs 40.08 g.

Expressing CEC in terms of equivalents (or milliequivalents) allows us to calculate exchange regardless of the charge of the cation. To calculate equivalent weight (or gram-equivalent weight) of a given cation, the gram-molecular weight (mole) must be divided by the charge on the cation.

Thus, the gram-equivalent weight of calcium ( $\text{Ca}^{2+}$ ) is  $40.08/2 = 20.04$ , half the gram-molecular weight. Hence, one mole of  $\text{Ca}^{2+}$  (40.08 g) would equal two equivalents of  $\text{Ca}^{2+}$  (20.04 g), but one mole of  $\text{Na}^+$  (22.99 g) would still be equal to one equivalent of  $\text{Na}^+$  (22.99 g).

To calculate the CEC of a given zeolite, one must know the chemical formula of the zeolite. Using the formula of clinoptilolite referenced earlier, for each formula unit, 3 Na + 3 K are exchangeable or that 6 equivalents of cations are exchangeable for each formula unit.

The weight of a formula unit can be calculated by adding up the atomic weights of the constituent atoms. For the above formula, this amounts to 2774.37 g. Thus, this particular clinoptilolite would have a cation-exchange capacity of 6 equivalents per 2774.37 gram, or, recalculating, 0.00216 equivalents per gram, or 2.16 milliequivalents (meq) per gram per zeolite molecule. If we were to exchange the singly-charged Na and K in this formula with doubly-charged Ca, the resultant formula would be written:



Note that only half as many double-charged calcium ions are needed to balance the number of singly charged sodium and potassium ions. Calculating the CEC of the Ca-exchanged clinoptilolite yields the same value in terms of meq/g (actually very slightly more because the molecular weight of 4 calcium's is slightly less than the molecular weight of 4 sodium's + 4 potassium.)

Using CEC expressed in terms of milliequivalents (mcci) per gram (or 100 g) makes it easier to compare how much of any cation can be exchanged by a particular zeolite, without having to worry about the charge on the cation involved.

The calculated CECs of Clinoptilolite, based on theoretical formulae is:



It is often desirable to express cation-exchange capacity in terms of weight percent (e.g., how many grams of ammonium ion ( $\text{NH}_4^+$ ) could be exchanged onto 1 gram of clinoptilolite). If the CEC of the zeolite (or zeolitic ore, for that matter) is known (in terms of meq/g), this is readily accomplished.

The number of milliequivalents of the given cation (i.e.,  $\text{NH}_4^+$  or  $\text{Cu}^{2+}$ ) must be converted to grams by multiplying by the gram-equivalent weight of the cation. For singly-charged cations, this is the same as multiplying by the gram-molecular weight, but for double charged cations (e.g.,  $\text{Cu}^{2+}$ ), the number of meq/g must be multiplied by half the gram-molecular weight (i.e., converting gram-equivalent weight to gram-molecular weight).

Hence, 1 g of a sample of clinoptilolite-rich ore having a measured CEC of 2.00 meq/g could load (exchange) 3.67 wt. % (g/100 g)  $\text{NH}_4^+$ . The calculation is simple; merely multiply the known CEC of the zeolitic material by the milliequivalent weight (i.e., 1/1000 of the equivalent weight) of the atomic species involved. The following table lists the number of grams of various atoms taken up by one gram of zeolitic materials having the indicated CECs.

This information and these tables were prepared by F.A. Mumpton, Chairman of the International Committee on Natural Zeolites.

CEC (meg/g)	wt.(g)	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50	3.75	4.00
NH4+	.0187	0.028	0.033	0.037	0.042	0.047	0.051	0.056	0.061	0.065	0.070	0.075
Cs+4	.0329	0.049	0.058	0.066	0.074	0.082	0.091	0.099	0.107	0.115	0.123	0.132
Cu2+	.0318	0.048	0.056	0.064	0.071	0.079	0.087	0.095	0.103	0.111	0.119	0.127
Pb2+	.1036	0.155	0.181	0.207	0.233	0.259	0.285	0.311	0.337	0.363	0.389	0.414
Sr2+	.0438	0.066	0.077	0.088	0.099	0.110	0.120	0.131	0.143	0.153	0.164	0.175

## Human Exposure to Environmental Chemicals

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In our increasingly industrialized world, the issue of toxic environmental exposure is coming to the forefront as an issue of public health and safety. In the 2009 the “Fourth National Report on Human Exposure to Environmental Chemicals” (prepared jointly by the Department of Health and Human Services, Centers for Disease Control and Prevention and the National Center for Environmental Health updated 2011) gives a comprehensive look at what the human exposure is in a cross section of Americans. To understand the depth and severity of what the average American is exposed to on a daily basis you can read the full report here: [www.cdc.gov/exposurereport/](http://www.cdc.gov/exposurereport/), including updated tables for 2012.

## Why a Colloidal form of Pure Body?

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Pure Body is a liquid suspension of zeolite clinoptilolite in pure water. Pure Body is sized to 0.4 Micrometers (microns) mean average in size, to allow for detoxification benefits on a systemic level (through absorption in the small intestine), and detoxification in the large intestine.\*

Third-party independent chemical analyses, x-ray diffraction analysis and particle size analysis all attest to the efficacy of Pure Body to support the body’s ability to detoxify heavy metals and other toxins, assist in balancing the body’s pH and supporting the immune system.\*

At 0.4 mean microns, the particle size is still too large to remain in suspension in pure water. This means there are areas Pure Body cannot access in the body since it relies on absorption via villi in the small intestine and cannot use water as its transportation medium throughout the body.

A colloidal suspension allows for particles sized so small they can remain suspended inside water molecules, providing a delivery mechanism for clinoptilolite zeolite throughout the body with increased surface area, hence, delivering an effective, extra strength version of Pure Body, called Pure Body Extra.\*

\*These statements have not been evaluated by the Food and Drug Administration. Our products are not intended to diagnose, treat, cure or prevent any disease.

## What is a Colloid?

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### Chemistry

- a. A system in which finely divided particles, which are approximately 10 to 10,000 angstroms in size, are dispersed within a continuous medium in a manner that prevents them from being filtered easily or settled rapidly.
- b. (Chemistry) Also called colloidal solution, suspension a mixture having particles of one component, with diameters between  $10^{-7}$  and  $10^{-9}$  meters, suspended in a continuous phase of another component. The mixture has properties between those of a solution and a fine suspension.

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The above definition is useful to understand the differences between the Pure Body product and the colloidal Pure Body Extra. It is simply a matter of size. To translate the sizes above, a colloid is between 1 nanometer and 100 Micrometers in size.

Pure Body is sized to 0.4 Micrometers (microns) mean average in size. The colloidal suspension of Pure Body Extra is sized in the nanometer range which forms a very stable suspension and is a true colloidal. In effect, the zeolite particles are small enough to fit inside clusters of water molecules, creating a suspension that is colorless, odorless and tasteless.\*

Imagine for a moment the standard Pure Body particle size of 0.4 micron mean average being the equivalent to a NBA basketball (9.5 inches in diameter). In contrast, the colloidal Pure Body Extra would be equivalent to a small pearl (9.65 mm).

### **This offers two distinct advantages: smaller size and increased surface area.**

With the smaller particle size, it is a logical assumption that the smaller the particle the more efficient it is in getting in the more inaccessible parts of the cellular structure. This smaller size increases the effectiveness in being able to remove toxins from parts of the body that a larger zeolite simply will not go due to size. This includes the more dense muscle tissues, parts of the lungs, and other organs that due to enzymatic barriers restrict larger particles of zeolite from entering. A colloidal suspension will have a greater impact for detoxification by being able to go where the finest capillaries flow at a true cellular level.\*

Now think of surface area. Imagine how many pearls you could fit inside that basketball. The combined surface area of those pearls would greatly surpass the surface area of the single basketball. With a nanometer size range, it takes many more particles to fill the space of a single particle at 0.4 microns, creating a greater area of negatively-charged points for positively-charged toxins to be trapped and attach to the zeolite.\*

## Well documented safety of colloidal minerals

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References <sup>1,5,7,9,13,17,18,19,21,22,23,24,25,26,27,68,71,73,84,86</sup>

The safety of colloidal minerals is well studied. Nature supplies colloidal minerals to us in our water supply and foods every day. The safety of colloidal zeolite in the size range Touchstone Essentials is producing has been well studied in vitro and in vivo (see above).

All of the above references for the safety of colloidal zeolites come from [www.pubmed.gov](http://www.pubmed.gov) and show the in-depth research that has gone into the safety studies for colloidal zeolites. The zeolite has been shown to be biologically inert even at the small size it takes to form a colloidal solution with zeolite. The main characteristics of zeolite are still in place.

\*These statements have not been evaluated by the Food and Drug Administration. Our products are not intended to diagnose, treat, cure or prevent any disease.

- The zeolite Clinoptilolite has been recognized as safe, having been granted GRAS status by the FDA (Generally Recognized as Safe).
- Additionally, Clinoptilolite zeolite has a documented affinity (or preference) for positively-charged heavy metals and toxins and will not remove beneficial nutrients.
- The proprietary processing for Pure Body Extra removes any existing environmental pollutants from the zeolite cages, and fills the cage-like structures with the exchangeable ions calcium, magnesium, potassium and sodium, which in effect, means Pure Body Extra will always swap out one of its beneficial ions in exchange for positively-charged heavy metals and toxins.
- The Clinoptilolite zeolite in Pure Body Extra is mined from a well-known US mine with documented safety protocols, is a Water Quality Association Gold Certified Supplier, and the zeolite is California Prop 65 Compliant.
- Clinoptilolite zeolite is not stored in the body, and is excreted via the kidneys within 4-6 hours of ingestion.
- Given the natural hydrophilic nature of zeolites and the increased surface area of Pure Body Extra, increasing water intake is suggested to facilitate the body's ability to remove toxins.
- The manufacturing and bottling facilities for Pure Body Extra all follow cGMP (Good Manufacturing Practices) in the handling of both the raw materials and the finished product.
- Touchstone Essentials uses an independent laboratory to test every batch of Pure Body Extra. Chemical analysis is conducted for everything from heavy metals, to organic compounds, to microbial assays. Independent lab results are published and available on the Touchstone Essentials website.

## The effectiveness of colloidal zeolite

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References <sup>2,4,6,140,20,21,22,26,28,31,34,35,36,39,40,41,44,45,46,49,53,54,55,56,61,62,68,78,79,82,85</sup>

In addition to the safety of colloidal zeolite, its effectiveness has also been well studied. This directly relates to the small size of the colloidal zeolite particles. The cationic exchange efficiency (CEC) is directly related to the number of aluminum interchanges and cages exposed. In other words, the smaller the zeolite particle is, the greater the number of cages available for heavy metal and toxin removal.

- While it is logical to assume the smaller particle is more effective, the research shows a marked increase in efficiency and amount of heavy metal removal with the reduction in particle size.
- Pure Body Extra undergoes proprietary processing to reduce the zeolite particle size to the nanometer range.
- The small particle size creates a vast surface area in every serving, delivering an effective cellular detoxification with every spray.\*

In addition to cation exchange, at this particle size range, new forces are in effect, and can greatly increase the detoxification potential of the zeolite. This new force is known as the van der Waals force (or van der Waals interaction) in physical chemistry.



Named after Dutch scientist Johannes Diderik van der Waals, is the sum of the attractive or repulsive forces between molecules (or between parts of the same molecule) other than those due to covalent bonds, the hydrogen bonds, or the electrostatic interaction of ions with one another or with neutral molecules. The term includes:

- The force between two permanent dipoles (Keesom force)
- The force between a permanent dipole and a corresponding induced dipole (Debye force)
- The force between two instantaneously induced dipoles (London dispersion force).

It is also sometimes used loosely as a synonym for the totality of intermolecular forces. Van der Waals forces are relatively weak compared to covalent bonds, but play a fundamental role in fields as diverse as supramolecular chemistry, structural biology, polymer science, nanotechnology, surface science, and condensed matter physics. Van der Waals forces define many properties of organic compounds, including their solubility in polar and non-polar media.

Van der Waals forces include attractions and repulsions between atoms, molecules, and surfaces, as well as other intermolecular forces. They differ from covalent and ionic bonding in that they are caused by correlations in the fluctuating polarizations of nearby particles (a consequence of quantum dynamics). Intermolecular forces have several major contributions:

- Attractive or repulsive electrostatic interactions between permanent charges (in the case of molecular ions)
- Dipoles (in the case of molecules without inversion center)
- Quadrupoles (all molecules with symmetry lower than cubic), and in general between permanent multipoles. The electrostatic interaction is sometimes called the Keesom interaction or Keesom force after Willem Hendrik Keesom
- Induction (also known as polarization), which is the attractive interaction between a permanent multipole on one molecule with an induced multipole on another. This interaction is sometimes called Debye force after Peter J.W. Debye
- Dispersion (usually named after Fritz London), which is the attractive interaction between any pair of molecules, including non-polar atoms, arising from the interactions of instantaneous multipoles

This force, along with the Zeta potential, explains the increased effectiveness even though the particle is smaller. What does all of this mean?

At this particle size, it is more than just cation-exchange with the zeolite. These forces allow for the colloidal zeolite to attract and hold much larger particles, which has particular relevance for Volatile Organic Compounds.

With a true colloidal suspension, the clinoptilolite particle is literally inside the individual water molecule clusters and thus suspended by those molecules. That is why the clinoptilolite will not “settle out” after even a long period of time and why the body accepts the clinoptilolite in areas where it otherwise will not. At this size, the charge of the clinoptilolite zeolite has a greater resonance and will attract and hold these organic compounds.

While not a replacement for Pure Body, which provides a body and gut detoxification, the Pure Body Extra is a more effective way to aid the body in detoxification due to its particle size, and access to the van de Waals force, creating a product capable of reaching cellular structures normally not available to micron-sized zeolite.

## Who can benefit from Pure Body Extra?

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In a word, everyone. The colloidal Pure Body Extra works differently than the standard Pure Body product, which was designed to have a mean average size of 0.4 microns to ensure that about half of the amount enters the colon and half of the amount enters the bloodstream. This allows zeolite supplementation to provide detoxification benefits to the colon and to the overall health and well-being of the person. For this reason, Pure Body can be taken in addition to Pure Body Extra.\*

With Pure Body Extra, 100 percent of the zeolite will enter the bloodstream. While this will offer detoxification benefits to everyone, two groups can derive the greatest benefit:

1. Those with a concern regarding exposure to heavy metals and environmental pollutants.
2. Individuals who perform a high degree of athletic training, such as a semi-professional or professional athletes due to the high rate of metabolic activity and added stress to the body.

Because Pure Body Extra may enter the bloodstream easily, it may better be able to enter the cells<sup>1,21,22,23,26,61, 84</sup> to remove toxins safely. Again, zeolite is not stored in the body and the elimination cycle is still in the 4 to 6 hour range to process through the kidneys.

Common signs of a body that is detoxifying can include tiredness, increased thirst, sweating, headaches and other aches and discomfort. This is a completely temporary, natural response to the body eliminating toxins and can be easily resolved by reducing the number of servings and gradually increasing servings over the course of a few days.

## Summary

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1. Clinoptilolite zeolite is safe and effective, proven in numerous trials involving both people and animals, and is granted GRAS (Generally Recognized as Safe) status with the FDA (Food and Drug Administration).
2. The zeolite Clinoptilolite is proven safe through its years of safe usage as a supplement for the general population including children.
3. Pure Body Extra is bringing to the market the very best that technology and nature can produce, with a natural mineral sized to access the body on a cellular level.\*
4. Safety and effectiveness of Pure Body Extra is instilled through the stringent protocols from testing the incoming raw material to knowing what is in every bottle of product that reaches the consumer.
5. Touchstone Essentials uses only independent third-party laboratories to conduct thorough testing on the zeolite.
6. Along with Pure Body, Pure Body Extra may result in a more complete removal of heavy metal and environmental toxins from the body.\*
7. Pure Body Extra represents a safe, natural and effective means to aid the body in detoxification.\*

\*These statements have not been evaluated by the Food and Drug Administration. Our products are not intended to diagnose, treat, cure or prevent any disease.

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